

CLAIMS

What is claimed is:

1. A drive unit for controlling a machine, in particular production machine, machine tool, robot and the like, with a plurality of components, each component comprising:
at least one component-specific function associated with the component,
and
a uniform communication module forming an interface.
2. The drive unit of claim 1, wherein at least one component of the plurality of components is hierarchically superior to the other components of the plurality of components, with the other components representing subordinate components, wherein the subordinate components communicate with the supervisory component via their respective interfaces.
3. The drive unit according to claim 1, wherein the interfaces are connected by logical point-to-point connections.
4. The drive unit according to claim 1, wherein the interfaces are connected by a bus system.

5. A method for controlling machines, in particular machine tools, robots and the like, with a drive unit that includes a plurality of components, comprising the steps of:
 - assigning a type to each of the components,
 - assigning at least one component-specific function to each component type,
 - associating a uniform communication module with each of the components, said communication module forming an interface,
 - associating a type-specific communication protocol with each component type,
 - designating at least one component of the plurality of components as being a hierarchically superior component, with the remaining components of the plurality of components being designated as subordinate components, and
 - enabling communication between the superior component and the subordinate components via the type-specific communication protocol.
6. The method of claim 5, wherein the type-specific communication protocol of each subordinate component is indicated to the superior component when the drive unit is switched on.
7. The method according to claim 5, wherein each component type is described by physical parameters associated with the component type, and wherein the physical parameters are indicated to the superior component by using another protocol that is independent of the component type.